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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,779	01/15/2004	Richard T. Bernardi	7338-88459	5456
24628	7590	11/29/2005	EXAMINER	
WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606			YUN, JURIE	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/757,779</p>	<p>Applicant(s)</p> <p align="center">BERNARDI ET AL.</p>	
	<p>Examiner</p> <p align="center">Jurie Yun</p>	<p>Art Unit</p> <p align="center">2882</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 11-19, 25 and 26 is/are rejected.
- 7) ☒ Claim(s) 2-10, 20-22, 27-28 is/are objected to.
- 8) ☒ Claim(s) 23 and 24 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
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DETAILED ACTION

1. The amendment filed 9/22/05 has been entered.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-22 and 25-28, drawn to an X-ray apparatus and method for inspecting an object, classified in class 378, subclass 57.
 - II. Claims 23 and 24, drawn to an X-ray beam collimator, classified in class 378, subclass 147.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the collimators in the combination do not have to use the collimator as claimed in claim 23. The subcombination has separate utility such as for CT medical imaging.
4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

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or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

6. Newly submitted claims 23 and 24 are directed to an invention that is independent or distinct from the invention originally claimed. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 23 and 24 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

7. Claim 5 is objected to because of the following informalities: there is lack of antecedent basis for "the pair of wings". It appears that claim 5 should depend on claim 2, and has been treated as such. Also, there appears to be a typo ("...that is at least source equal to..."). Appropriate correction is required.

8. Claim 10 is objected to because of the following informalities: there is lack of antecedent basis for "the postcollimator". It is assumed that claim 10 depends on claim 9, and has been treated as such. Appropriate correction is required.

9. Claims 21 and 22 are objected to because of the following informalities: the claims are identical. Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The claim language “a first collimator in addition to any other collimator that may be integral to the X-ray source,...” is vague and indefinite. Is there another collimator or not?

12. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. It is not clear whether or not the “source collimator” claimed in claim 11 is the same as the “first collimator” claimed in claim 1.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 11-17, 19, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Annis (USPN 5,493,596).

15. With respect to claims 1 and 19, Annis discloses an X-ray apparatus for inspecting an object (column 4, lines 12-16), such apparatus comprising: an X-ray source (34) and X-ray detector (50) disposed on opposing sides of a scanning zone (32), said X-ray source being disposed in a spaced-apart relationship with respect to the

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scanning zone; a first collimator (35) that may be integral to the X-ray source, disposed between the X-ray source and the scanning zone and being located proximate the X-ray source; a precollimator (36) disposed between the first collimator and the scanning zone, said precollimator being located proximate the scanning zone; and at least one intermediate collimator (40) disposed between the first collimator and the precollimator, said intermediate collimator having a spaced-apart relationship with respect to the precollimator and the first collimator.

Annis discloses all of the elements except the intermediate collimator being stationary with respect to the precollimator. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use another stationary collimator between the rotating intermediate collimator (40) and the precollimator (36), to further reduce scatter.

16. With respect to claim 11, Annis discloses a source collimator (35) disposed adjacent the X-ray source (34).

17. With respect to claims 12 and 13, Annis does not disclose the source collimator further comprises a collimating slot with an entrance having a width that is approximately one percent of a distance from a point of origin of X-rays from the X-ray source to the entrance of the source collimator, and with an exit having a width that is less than one percent of a distance from the point of origin of the X-ray source to the exit of the source collimator, but this would be obvious depending on the degree of collimation or resolution desired.

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18. With respect to claims 14 and 15, Annis does not disclose the intermediate collimator further comprises a collimating slot with an entrance having a width that is less than one-half percent of a distance from the X-ray source to the entrance of the intermediate collimator, and with an exit having a width that is about one-third percent of a distance from the X-ray source to the exit of the source collimator, but this would be obvious depending on the degree of collimation or resolution desired.

19. With respect to claims 16 and 17, Annis does not disclose the precollimator further comprises a collimating slot with an entrance having a width that is about one-tenth percent of a distance from the X-ray source to the entrance of the precollimator, and with an exit having a width that is larger than the entrance, but this would be obvious depending on the degree of collimation or resolution desired.

20. With respect to claim 25, Annis does not disclose the first collimator further comprises a collimating slot having an exit having a width that is larger than an entrance to the collimating slot, but this would be obvious depending on the degree of collimation or resolution desired.

21. With respect to claim 26, Annis does not disclose the intermediate collimator further comprises a collimating slot having an exit having a width that is larger than an entrance to the collimating slot, but this would be obvious depending on the degree of collimation or resolution desired.

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22. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Annis (USPN 5,493,596) as applied to claim 1 above, and further in view of Galish et al. (USPN 6,711,235 B2).

23. With respect to claim 18, Annis and Galish et al. do not disclose the precollimator further comprises a collimating slot with an entrance having a width that is about 0.05 percent of a distance from the X-ray source to the entrance of the precollimator, but this would be obvious depending on the degree of collimation or resolution desired.

Allowable Subject Matter

24. Claims 2-10, 27, and 28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

25. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to disclose an X-ray apparatus for inspecting an object, wherein the intermediate collimator further comprises a pair of wings for intercepting backscatter operatively extending from opposing sides of a collimating slot of the intermediate collimator towards the X-ray source, as claimed in claim 2. Prior art fails to disclose an X-ray apparatus for inspecting an object, wherein the precollimator further comprises a pair of wings for intercepting backscatter operatively extending from opposing sides of a collimating slot of the precollimator towards the X-ray source, as claimed in claim 6. Prior art fails to disclose an X-ray apparatus for inspecting an object, wherein the precollimator further comprises a pair of wings for intercepting backscatter operatively extending from opposing sides of a collimating slot of the precollimator towards the X-

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ray source and wherein the precollimator has an overall width that is at least equal to a collimating entrance of the precollimator, plus twice a setback of the pair of wings, plus twice a thickness of the pair of wings, as claimed in claim 8. Prior art fails to disclose an X-ray apparatus for inspecting an object, wherein the detector further comprises a postcollimator that supports a set of detector elements, said postcollimator further comprising a pair of wings for intercepting backscatter operatively extending from opposing sides of a front face of the set of detectors towards the X-ray source, as claimed in claim 9.

26. Claims 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. And, to correct duplicate claims 21 and 22.

27. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to disclose a method for inspecting an object, such method comprising the steps of providing a pair of wings on opposing sides of a collimator slot of the intermediate collimator to control backscatter, as claimed in claim 20. Prior art fails to disclose a method for inspecting an object, such method comprising the steps of providing a pair of wings on opposing sides of a collimator slot of the precollimator to control backscatter, as claimed in claims 21/22.

Response to Arguments

28. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jurie Yun whose telephone number is 571 272-2497. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

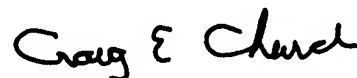
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jurie Yun
November 14, 2005



Craig E. Church
Primary Examiner